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PATENT
Case No. P-188

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
Whitehead et al.	)	
Serial No.: 09/938,009	)	Group Art Unit: 1617
Filed: August 23, 2001	)	Examiner: M. Bahar
For: METHODS FOR TREATMENT OF LUPUS ERYTHEMATOSUS	)	

RESPONSE TO FIRST OFFICE ACTION

Honorable Director of
Patents and Trademarks
Washington, D.C. 20231

Dear Sir:

Applicants' attorney thanks the Office Action of December 4, 2002. With these remarks, we traverse the rejection

As for the Section 112 rejection, Applicants submit that one skilled in the art understands clearly what "substantially" means under these circumstances. As the Examiner may know, it is sometimes possible for a compound at very high concentrations impossible to achieve therapeutically to inhibit enzymes that it is not targeted for. Whereas at therapeutic concentrations, the compound in question will have little, if any effect on the non-targeted enzyme. The import of these understanding to one

skilled in the art in this case is that the methods we claim are those where there is little, if any effect on the COX enzymes by the compounds administered to a patient. A patent claim does not have to be exacting, it merely has to be understandable to one skilled in the art, which our claims 1-5 and 38 clearly are. We request that this rejection be withdrawn.

As for the prior art rejection, the Examiner cites the Sperl patent, which mentions rheumatoid arthritis ("RA") and multiple sclerosis ("MS"), to reject the pending claims that involve lupus treatment. We believe that one skilled in the art would not necessarily make the leap the Exmainer suggests from the diseases Sperl mentions to lupus. First of all, there is no teaching in Sperl that PDE2 is implicated in lupus, which is a discovery the named inventors made. Secondly the pathogenesis of lupus is markedly different from RA or MS.

For example, in lupus – but not RA or MS – there is considerable systemic organ involvement, including cutaneous lesions, pleurisy, generalized andenopathy, and renal involvement. By contrast, in RA, the disease in localized to the joints. And in MS, the disease is confined to the de-myelination of the neurons (see and compare Exhibits A - C)[1].

In laboratory findings, there is a much wider range of auto-antibodies in lupus than is exhibited in RA or MS. In lupus, one finds auto-antibodies to double stranded DNA, Ro, La, Sm, RNP, Jo-11, and ASE-1. By contrast, in RA, one commonly finds rheumatoid factor auto-antibodies only. (See Exhibits A and B). In MS, the auto-immune reaction is confined to the myelin sheath (Exhibit C). We are unaware of specific auto-antibodies being characterized in MS, but believe that because the lupus antibodies are diagnostic and prognostic of disease etiology (see Exhibit A), any MS auto-antibodies have to be substantially different.

In lupus, one also sees class III hypersensitivity that is associated with immune complex organ damage, including kidneys, heart, lung and skin. By contrast, any hypersensitivity is confined to the synovial fluid in the joints in RA, and is not present at

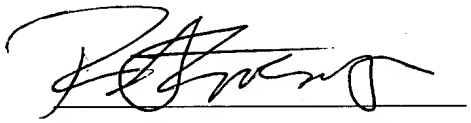
[1] Exhibits A and B are from Section 5, chapter 50 of the Merck Manual of Diagnosis and Therapy. Exhibit C is from Section 14, chapter 180 of the same reference.)

all in MS (See Exhibit D, Section 12, Chapter 148 of the Merck Manual of Diagnosis and Therapy).

Because of these considerable differences between the initiation, progression and clinical manifestation of these different disorders, one skilled in the art would not make the leap from Sperl's passing reference to RA and MS to this invention that involves the treatment of lupus.

Accordingly, this case should be in condition for allowance. We request a notice to this effect in the next office action.

Respectfully submitted,



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